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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/657,272	09/07/2000	Toru Matama	Q58745	9969

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WASHINGTON, DC 20037

EXAMINER

MILLER, RYAN J

ART UNIT	PAPER NUMBER
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2621

DATE MAILED: 07/15/2003

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Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/657,272

Applicant(s)

MATAMA, TORU

Examiner

Ryan J. Miller

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-35 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 07 September 2000 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 3.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

DETAILED ACTION

Drawings

1. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because a) they do not include the following reference sign(s) mentioned in the description: "a" used to define the scanning direction and b) they include the following reference sign(s) not mentioned in the description: "16" referring to the scanner in Fig. 4. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Specification

2. The disclosure is objected to because of the following informalities: The specification, as well as the abstract, is replete with grammatical errors making it difficult to read and understand. For example: the phrases a) "while it is being held on or by a platen, a mask or the like having an aperture in a slit form (not shown) by a moving device 115a" on page 24, lines 22-24, b) "a method of mirror scan which performs scan while the mirror in the optical path is moved may be used" on page 32, lines 16-18, and c) "which exists in the image reading optical path or on the image recording medium from being transcribed onto a print image of the visible" in the abstract are poorly written and difficult to understand. These are just a few examples of problems with the specification and the abstract. Therefore, the examiner requests a complete review of the specification and the abstract. A corrected or substitute specification and abstract in proper idiomatic English and in compliance with 37 CFR 1.52(a) and (b) are required. A substitute

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specification, as well as a substitute abstract, must be filed and accompanied by a statement that it contains no new matter.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

4. Claims 1-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There are a number of problems with the claims that render them indefinite. These problems are mostly grammatical in nature and seem to be caused by errors in the translation. A few examples of these errors are presented below; however, the examiner requests a complete review and revision of the claims to adjust for all of the errors in the claims.

Regarding claims 1 and 17, the claim language “reading by scanning a specified detecting light” is grammatically awkward and difficult to understand. What is being read? Should this claim read “reading the image recording medium by scanning a specified detecting light”? Or is something besides the image recording medium being read? Clarification of this issue is required.

Regarding claims 3 and 19, the claim language “the change of the light quantity data in a streak form that has grown up in a same sensor position” is grammatically awkward and difficult to understand. What is a “streak form”? What is meant by “grown up in a same sensor position”? Clarification of these phrases is required.

Regarding claims 4 and 20, the claim language “reading said specified detecting light with said line sensor for a specified period of time in a same way as in a case of transferring said image recording medium in relation to said line sensor” is difficult to understand. The examiner is uncertain of the meaning of the limitation “in a same way as in a case of transferring said image recording medium in relation to said line sensor”. Does the applicant mean that the line sensor moves over the image recording medium? Or, does the applicant mean that the image recording medium moves in relation to the line sensor? Clarification of this issue is required.

Regarding claim 14, the claim recites the limitation "said image reading medium" in line 3. There is insufficient antecedent basis for this limitation in the claim. The examiner suggests that this limitation be amended to read, “said image recording medium”.

These are only examples of the overall problems with the claims. As explained above, a complete review of the claims for any other deficiencies is required.

Claim Rejections - 35 USC § 102

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. Claims 1-6, 11-14, 17-22, and 27-30 are rejected under 35 U.S.C. 102(b) as being anticipated by Poetsch (GB 2140245 A).

As applied to claim 1, Poetsch discloses an image reading method which reads an image on an image recording medium by a visible light, comprising the steps of: reading by scanning a specified detecting light in a one-dimensional direction using an optical path of said visible light

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(see Fig. 2 and page 1, line 121 – page 2, line 6: The reference describes scanning an illumination light (scanning a specified detecting light), which emits both visible and infra-red light, over the film and reading the light on a semiconductor line sensor (i.e. in a one dimensional direction).); and detecting at least one of a foreign matter which adheres and a scratch which exists in the optical path of said visible light based on continuity of change of light quantity data of the thus read specified detecting light in said one-dimensional direction (see page 2, lines 7-25: The reference describes that a scratch on the film (i.e. a scratch which exists on the optical path of the visible light since the film is in the optical path) can be detected using a filter disc along with line sensor 13 that detects and enhances a change of light quantity caused by a scratch on the film.).

As applied to claim 2, Poetsch discloses that when the change of the thus read light quantity data is detected in a continuous state in said one-dimensional direction at a specified reading position perpendicular to said one-dimensional direction, at least one of said foreign matter and scratch is detected (see Fig. 2 and page 2, lines 42-46: The reference discloses that the scanning is carried out in a continuous run and the reading direction is perpendicular to the one dimensional direction as can be seen in Fig. 2.).

As applied to claim 3, Poetsch discloses that at least one of the foreign matter which adheres and the scratch which exists in said optical path is detected by detecting the change of the light quantity data in a streak form that has grown up in a same sensor position by means of a line sensor for said specified detecting light (see page 2, lines 7-25: The reference describes that a scratch on the film (i.e. a scratch which exists on the optical path of the visible light since the film is in the optical path) can be detected using a filter disc along with line sensor 13 that

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detects and enhances a change of light quantity caused by a scratch on the film (i.e. by detecting the change of the light quantity data in a streak form that has grown up in a same sensor position by means of a line sensor for said specified detecting light).).

As applied to claim 4, Poetsch discloses that scanning in said one-dimensional direction for reading said specified detecting light by making use of the optical path of said visible light is performed by allowing said image recording medium and said line sensor to move relatively by means of transferring said image recording medium in relation to said line sensor (see Fig. 2:

The reference describes that the film 1 moves in the direction of the arrow shown in Fig. 2.

Therefore, the image recording medium (i.e. the film) is transferred (i.e. moved) in relation to the line sensors (i.e. 13, 14, and 15 in Fig. 2).).

As applied to claim 5, Poetsch discloses that scanning in said one-dimensional direction for reading said specified detecting light by making use of the optical path of said visible light is performed by allowing said image recording medium or said specified detecting light and said line sensor to move relatively by means of scanning by transferring a mirror in said optical path (see Fig. 4 and page 2, lines 35-46: The reference describes that the film moves in the direction shown in Fig. 4 and is scanned by the light which irradiates the mirror 32. This mirror is clearly in the optical path.).

As applied to claim 6, Poetsch discloses the step of issuing an alarm, when at least one of the foreign matter which adheres or the scratch which exists in said optical path is detected (see page 2, line 47-60: The reference describes that when a scratch exists in the film (i.e. the optical path) a signal (i.e. an alarm) from the line sensor is provided to the defect-masking circuit 35.).

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As applied to claim 11, Poetsch discloses that the specified detecting light is visible light (see page 1, line 124-125: The reference describes that the projection lamp, which provides the specified detecting light, emits visible light.).

As applied to claim 12, Poetsch discloses that when said visible light is read by scanning in said one-dimensional direction by making use of the optical path of said visible light, said image recording medium is removed from the optical path of said visible light (see Fig. 2: The reference discloses that after the film (i.e. image recording medium) is sent through the film scanning apparatus in the direction provided by the arrow, it is removed from the optical path of the visible light.).

As applied to claim 13, Poetsch discloses that the specified detecting light is an invisible light (see line 124-125: The reference describes that the projection lamp, which provides the specified detecting light, emits infra-red light, which is invisible light.).

As applied to claim 14, Poetsch discloses that at least one of the foreign matter and the scratch on said image recording medium is detected by the invisible light (see page 2, lines 7-25: The reference describes that infra-red light (i.e. invisible light) is used to detect scratches in the film (i.e. image recording medium).).

As applied to claims 17-22 and 27-30, which merely call for an apparatus for performing the method of claims 1-6 and 11-14, Poetsch discloses such an apparatus as can be seen in Figs. 2 and 4.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 7-10, 15, 16, 23-26, 31, 32, and 33-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Poetsch (GB 2140245 A) and Sugiura et al. (U.S. Patent No. 6,034,766 A). The arguments as to the relevance of Poetsch in the rejection above are incorporated herein.

Claim 7 calls for the step of determining if foreign matter adheres to or a scratch exists on an optical element in the optical path. This element is absent from Poetsch; however, Sugiura et al., in the same problem solving area of optical defect detection, discloses an apparatus that determines if a scratch or particle is on an optical element (see column 11, line 65 – column 12, line 9: The reference describes that if an optical member (i.e. optical element) has a defect, such as a scratch or a particle of dust, the light is diffused and a different light pattern than expected is determined by the line sensor. Therefore, the system will know that a defect exists and send a signal to the operator.). Claim 8 further specifies that the optical element is a mirror. Poetsch discloses that the optical element is a mirror (see Fig. 4: The reference discloses a mirror 32.).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Poetsch by adding the step of determining if foreign matter adheres to or a scratch exists on an optical element in the optical path as taught by Sugiura et al. because such a determination allows for the system to detect if the defect exists in the actual image recording medium or if the defect exists in the imaging system. Therefore, the system will

save time and lower costs since the operator will be able to easily determine if the film is defective due to a scratch or if the actual scanner is defective.

Claim 9 calls for the position of the optical element to be changed in accordance with a detection result of at least one of the foreign matter and the scratch which adheres to or exists on the optical element in said optical path. Poetsch fails to disclose this element; however Sugiura et al. discloses changing the position of the optical element based on the detection result (see column 9, lines 44-47: The reference discloses that the a slide table unit is used to move the optical member (i.e. optical member) based on data output from the line sensor (i.e. detection result).).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Poetsch by adding the ability to change the position of the optical member based on the detection result as taught in Sugiura et al. because such an ability allows the system to automatically diminish errors in the scanning system caused by scratches or dust particles on the actual optical elements in the system. This will, therefore, reduce false detections and increase the overall effectiveness of the system.

Claim 10 calls for enlarging the detected defect. This element is absent from Poetsch, but is disclosed by Sugiura et al. (see column 24, lines 33-38: The reference describes forming an enlarged image of the optical defects.).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Poetsch by adding the ability to enlarge the detected defect as taught by Sugiura et al. because, by enlarging the defect, the operator is able to correct the problem much more efficiently.

Claim 15, which is representative of claim 16, calls for changing the focusing position of the detecting light. Such a focusing element is absent from Poetsch, but is disclosed in Sugiura et al. (see column 9, lines 17-19: The reference describes that the imaging lens can be used to focus with respect to the line sensor.).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Poetsch by adding the focusing capabilities taught in Sugiura et al. because the ability to focus the image allows for the best and most accurate detection of scratches and foreign matter.

As applied to claims 23-26, 31, and 32, which merely call for an apparatus for performing the method of claims 7-10, 15, and 16, Poetsch, in combination with the apparatus shown in Fig. 5 of Sugiura et al., discloses such an apparatus as can be seen in Figs. 2 and 4.

As applied to claim 33, Poetsch discloses a method of discriminating a defect of image data produced from an image which has been formed on an image recording medium, comprising: a second detecting step of detecting a second optical defect existing on said image recording medium (see page 2, lines 7-25: The reference describes that a scratch on the film (i.e. a second optical defect existing on said image recording medium) can be detected using a filter disc along with line sensor 13 that detects and enhances a change of light quantity caused by a scratch on the film.).

As applied to claim 34, Poetsch discloses using an invisible light (see line 124-125: The reference describes that the projection lamp, which provides the specified detecting light, emits infra-red light, which is invisible light.).

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Poetsch does not teach a first detecting step of detecting a first optical defect existing in an optical system. Sugiura et al. discloses such a first detecting step (see column 11, line 65 – column 12, line 9: The reference describes that if an optical member (i.e. optical system) has a defect, such as a scratch or a particle of dust, the light is diffused and a different light pattern than expected is determined by the line sensor. Therefore, the system will know that a defect exists and send a signal to the operator (i.e. a first detecting step).

As applied to claim 35, Sugiura discloses a step of focusing the position of the light based on the detection results (see column 9, lines 17-19: The reference describes that the imaging lens can be used to focus with respect to the line sensor.).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to modify Poetsch by adding first detecting step of detecting a first optical defect existing in an optical system as taught by Sugiura et al. because such a determination allows for the system to detect if the defect exists in the actual image recording medium or if the defect exists in the imaging system. Therefore, the system will save time and lower costs since the operator will be able to easily determine if the film is defective due to a scratch or if the actual scanner is defective.

Conclusion

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan J. Miller whose telephone number is (703) 306-4142. The examiner can normally be reached on M-F 8:00-4:30.

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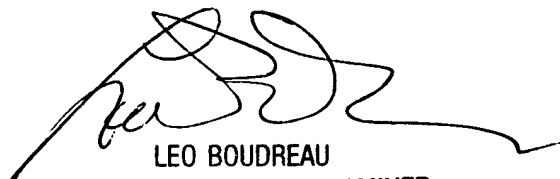
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Leo Boudreau can be reached on (703) 305-4706. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-4750.



Ryan J. Miller
July 7, 2003

Ryan J. Miller
Examiner
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LEO BOUDREAU
SUPERVISORY PATENT EXAMINER
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